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TECHNICAL REPORT  
February 15, 1953

Contract N-onr (660(00))  
NRO (170-176)

Human Dynamics Laboratory  
University of Chicago

Progress to date --as referred to statement of aims, February 15, 1952

Technical Aims:

The enclosed document is the first outline draft of a monograph in preparation. This monograph will mark the completion of the first major phase of the contract work: the development of techniques for the study of interaction in groups.

Our techniques are:

- a) a method of sequential graphic analysis of group process, conceptualized as a continually fluctuating relationship between "work" and "emotionality";
- b) a method of uncovering factors representing communalities in self-perception among group members, and providing a picture of group structure from which prediction of major areas of group process problems is possible; and
- c) a method of assessing the "valencies" of individuals and groups toward "work" and the various "emotionalities", and from which probable roles of individuals in groups can be roughly predicted if the task is defined.

Methodological Aims:

Following the study of four human relations training groups (Bethel "T" groups), a tentative set of principles for training in such groups was formulated. This winter we proceeded to test them by application to a training group in the laboratory. Certain clarifications resulted. We are now completing the write-up of the assumptions and principles for this "inductive laboratory-type" training and of a case study which pretty clearly exemplifies consistent use of these principles.

We now are ready to return to the data on the four original groups, and, through application of the techniques indicated above, to penetrate further into the dynamics of the groups during each of the major types of "interaction units" identified by our method of unitizing. This "penetration" is expected to shed new light on the processes of training in such groups.

Conceptual Aims:

Progress in the above two areas has resulted in a great deal of clarification and re-organization of the basic theoretical framework adopted for this study in 1951. The monograph on methods will present the present formulation of basic theory (following Bion) as clarified through our work on techniques and training.

Next steps include revision of and addition to the list of hypotheses given in last years technical report, and the systematic use of our instruments for the testing of these hypotheses utilizing present data plus data from the new experiments indicated below. Revision and addition to theory will result.

B. Project Personnel (July 1, 1952 - June 30, 1953)

Principal Investigator: Herbert A. Thelen  
Director, Human Dynamics Laboratory  
Project Director: Dorothy Stock  
(post-doctoral). Joined staff October 1, 1952\*  
Project Assistants: Saul Ben-Zeev  
Ida Heints (beginning October 1, 1952)\*  
Bill Hill (beginning October 1, 1952)\*

C. Proposed projects:

It is expected to continue the study through next year along the lines indicated above. The projects through which this will be arranged are:

1. The influence of sub-groups on participation in human relations training groups.

This study concerns itself with the relationships which obtain between three types of sub-group structures: phenomenological sub-groups (sub-groups composed of members having similar self-concepts regarding their reactions to a variety of group situations); sociometric sub-groups; and behavioral sub-groups. The subjects for this study will be one of the Bethel training groups, for whom the following data is available: Q-sort self-descriptions; behavioral data (collected by means of the observational system described in 1B(1), above); and sociometric data (three sociometric questions were administered to each member of the group after each meeting). The Q sort data will be analyzed and as much information as possible derived from this data concerning phenomenological sub-groupings. On the basis of this information predictions will be made to the other kinds of sub-groups and will be checked against the data. A number of specific hypotheses have been identified. Some of these are: In behavioral units which involve group decision there will be at least one contributor representing each of the phenomenological sub-groups; affiliation will be most apparent during periods in which work has given way to emotionality; members belonging to the same phenomenological sub-group will choose each other sociometrically more often than by chance.

2. The influence of group composition on the quality of work, the emotional characteristics of the group, and the character of the work-emotionality relationship.

This research involves setting up a controlled laboratory experiment in which task, leadership, and time is held constant for a number of groups, but group composition or membership is systematically varied. The Group Sentence Completion

\* These people were all part of the original staff of the project, beginning in April, 1951. They were away during the summer. The three non-PhD's are working up theses in connection with this project.

A variety of part-time help has been employed for specific routine jobs; a full-time secretary has been employed since November 17, 1952.

Test and the self-referent Q-sort will be administered to a large number of subjects. Each person will be described in terms of his valencies for the various emotional modalities and for work. On the basis of this analysis individuals will be chosen who have strong valencies toward dependency; toward counterdependency; and also some who are strongly conflicted in the dependency-counterdependency area. Six groups of 5 or 6 persons each will be composed on the basis of this information. Two of the six groups will be composed of persons with strong valencies for operating in a dependency culture; two will include persons with strong counterdependency tendencies; and two will be composed of persons conflicted in this area. Each group will be presented with the same task and observers will graph the resulting interactions. Observers may also be asked to describe each group by means of a group Q-sort (to be developed). These two devices will permit one to identify the quality of work, the emotional characteristics of the group, and the work-emotionality relationships for each group. The six groups will be compared and their characteristics will be related to the original composition of the group.

### 3. Shifts in group structure occurring during the course of a training group.

We know from preliminary research that a training group, by its third week, exhibits a well-defined internal structure. However we do not know whether this structure was present from the beginning of the group, whether it developed as a result of the common group experience, or whether it was potentially present in the beginning but took its specific form in response to certain elements of the group experience. This research is an attempt to gather data relevant to these questions. The Q-sort procedure described in 1B(6), above, permits one to identify group structure in the following terms: the number of phenomenological sub-types present in the group; their work and emotionality characteristics; and the distribution of the membership among these sub-types. The present research requires administering the Q-sort after the first group meeting and again at the close of the group experience. Factor analysis will be applied to the two populations of sorts, and the results compared. The following kinds of changes (if they occur) can be identified: changes in the number of sub-types; changes in the work-emotionality characteristics of the sub-types; changes in membership in the sub-types. Some specific hypotheses are: change will occur in the direction of greater cohesiveness; each sub-type will maintain its essential emotional characteristics but will shift in the direction of greater integration of work with emotionality; the group as a whole will become in certain respects more like the sub-group which was numerically dominant in the beginning of the group; the group as a whole will become more like the leader.

### 4. The analysis of dimensions of interaction

After we have a collection of several hundred units of interaction, we shall investigate the differences and similarities among different values of work, emotionality, and work-emotionality. Among these dimensions for study are: participation patterns, kinds of behaviors characteristic of these unit values, nature of leader participation, and a variety of situational factors; clarity of definition of goals, requirements of the situation for self-and group oriented remarks, extent to which commitment to action is implied in the task, difficulty of the task (as related to competence), level of abstraction of the argument, and the like. It is hoped from this analysis that we can identify a rather limited set of dimensions for description of group interaction within a situation.

5. Development of means to analyze training requirements in various situations.

The study above leads into the possibilities of producing a typology of training situations: the exploring for interest versus the planning for stated objectives versus deciding on goals, and the like. It is expected that there will be found typical dynamics associated with each of these sorts of tasks. The study contemplates first, the identification of types of situations in terms of the typical dynamics of these situations, and second the analysis of training needs in each type of situation. This will yield considerable clarification of the trainer role because it will relate his role to (dynamically described group) situations rather than to general psychological theory about process. Of particular interest, also, will be the analysis of the relationship between trainer behavior and the initiation, maintenance, and termination of the various situationally referred types of dynamics in the group.

Herbert A. Thelen